

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. – 642. (Canceled)

643. (New) A substantially pure polypeptide comprising a polypeptide sequence listed in Table 2.

644. (New) A substantially pure polypeptide having at least 90% sequence identity to a polypeptide listed in Table 2.

645. (New) A substantially pure polynucleotide encoding a polypeptide listed in Table 2.

646. (New) A method for determining whether a patient has an increased risk for developing a neurological disease or disorder, said method comprising determining the presence of a mutation in the patient's gene encoding a GPCR polypeptide substantially identical to a polypeptide listed in any one of Tables 3-14 and 33, wherein the presence of said mutation indicates that said patient has an increased risk for developing a neurological disease or disorder.

647. (New) A method for determining whether a patient has an increased risk for developing a neurological disease or disorder, said method comprising measuring in said patient or in a cell from said patient the level of biological activity of a GPCR polypeptide substantially identical to a polypeptide listed in any one of Tables 3-

14 and 33, wherein an altered level in said biological activity, relative to normal, indicates that said patient has an increased risk for developing a neurological disease or disorder.

648. (New) A method for determining whether a patient has an increased risk for developing a neurological disease or disorder, said method comprising measuring in said patient or in a cell from said patient the expression of a GPCR polypeptide substantially identical to a polypeptide listed in any one of Tables 3-14 and 33, wherein altered levels in said expression, relative to normal levels, indicates that said patient has an increased risk for developing a neurological disease or disorder.

649. (New) The method of claim 648, wherein said expression is determined by measuring levels of said GPCR polypeptide.

650. (New) The method of claim 648, wherein said expression is determined by measuring levels of RNA encoding said GPCR polypeptide.

651. (New) A method for determining whether a patient has an increased risk for developing a neurological disease or disorder, comprising determining the presence of a polymorphism in the patient's gene encoding a GPCR polypeptide substantially identical to a polypeptide listed in any one of Tables 3-14 and 33, wherein the presence of said polymorphism associated with a neurological disease or disorder indicates the person has an altered risk for developing a neurological disease or disorder.

652. (New) A method of treating or preventing a neurological disease or disorder in a patient, said method comprising administering to said patient a nucleic acid molecule encoding a GPCR polypeptide substantially identical to a polypeptide listed in any one of Tables 3-14 and 33.

653. (New) A method of treating or preventing a neurological disease or disorder in a patient, said method comprising administering to said patient an expression vector comprising a nucleic acid molecule operably linked to a promoter, said nucleic acid molecule encoding a GPCR polypeptide substantially identical to a polypeptide listed in any one of Tables 3-14 and 33.

654. (New) A method of treating or preventing a neurological disease or disorder in a patient, said method comprising administering to said patient a compound that modulates the biological activity of a GPCR polypeptide substantially identical to a polypeptide listed in any one of Tables 3-14 and 33.

655. (New) A method for identifying a compound that may be useful for the treatment or prevention of a neurological disease or disorder, said method comprising the steps of:

(a) contacting a cell expressing a GPCR polypeptide substantially identical to a polypeptide listed in any one of Tables 3-14 and 33 with a candidate compound; and

(b) measuring the biological activity of said GPCR polypeptide expressed in said cell,

wherein altered biological activity of said GPCR polypeptide, relative to a cell not contacted with said compound, indicates that said candidate compound is a compound that may be useful for the treatment of a neurological disease or disorder.

656. (New) A method for identifying a compound that may be useful for the treatment or prevention of a neurological disease or disorder, said method comprising the steps of:

(a) contacting a cell expressing a gene encoding a GPCR polypeptide substantially identical to a polypeptide listed in any one of Tables 3-14 and 33 with a candidate compound; and

(b) measuring expression of said GPCR polypeptide in said cell,
wherein altered expression of said GPCR polypeptide, relative to a cell not contacted with said compound, indicates that said candidate compound is a compound that may be useful for the treatment or prevention of a neurological disease or disorder.

657. (New) A method for identifying a compound that may be useful for the treatment or prevention of a neurological disease or disorder, said method comprising the steps of:

(a) providing a nucleic acid molecule comprising a promoter for a gene encoding a GPCR polypeptide substantially identical to a polypeptide listed in any one of Tables 3-14 and 33, operably linked to a reporter gene;

(b) contacting said nucleic acid molecule with a candidate compound; and

(c) measuring expression of said reporter gene,

wherein altered reporter gene expression, relative to a control not contacted with said candidate compound, indicates that said candidate compound is a compound that a compound that may be useful for the treatment or prevention of a neurological disease or disorder.

658. (New) A method for identifying a compound that may be useful for the treatment or prevention of a neurological disease or disorder, said method comprising the steps of contacting a GPCR polypeptide substantially identical to a polypeptide listed in any one of Tables 3-14 and 33, and a candidate compound; and determining whether said candidate compound interacts with said GPCR polypeptide, wherein interaction between said candidate compound and said GPCR polypeptide identifies said candidate compound as a compound that may be useful for the treatment or prevention of a neurological disease or disorder.

659. (New) A method for identifying a compound that may be useful for the treatment or prevention of a neurological disease or disorder, said method comprising the steps of contacting a GPCR polypeptide substantially identical to a polypeptide listed in any one of Tables 3-14 and 33, and disposed in a lipid membrane with a candidate compound; and determining whether said candidate compound interacts with said GPCR polypeptide wherein interaction between said candidate compound and said GPCR polypeptide identifies said candidate compound as a compound that may be useful for the treatment or prevention of a neurological disease or disorder.

660. (New) A method for identifying a compound that may be useful for the treatment or prevention of a neurological disease or disorder, said method comprising the steps of:

(a) providing (i) a GPCR polypeptide substantially identical to a polypeptide listed in any one of Tables 3-14 and 33, and (ii) a second polypeptide that interacts with said GPCR polypeptide;

(b) contacting said polypeptides with a candidate compound; and

(c) measuring interaction of said GPCR polypeptide and said second polypeptide, wherein an alteration in interaction of said GPCR polypeptide and said second polypeptide identifies said candidate compound that may be useful for the treatment or prevention of a neurological disease or disorder.

661. (New) The method of any of claims 646-660, wherein said neurological disease or disorder is selected from the group consisting of abetalipoproteinemia, abnormal social behaviors, absence (petit mal) epilepsy, absence seizures, abulia, acalculia, acidophilic adenoma, acoustic neuroma, acquired aphasia, acquired aphasia with epilepsy (Landau-Kleffner syndrome) specific reading disorder, acquired epileptic aphasia, acromegalic neuropathy, acromegaly, action myoclonus-renal insufficiency syndrome, acute autonomic neuropathy, acute cerebellar ataxia in children,

acute depression, acute disseminated encephalomyelitis, acute idiopathic sensory neuronopathy, acute intermittent porphyria, acute mania, acute mixed episode, acute pandysautonomia, acute polymorphic disorder with symptoms of schizophrenia, acute polymorphic psychotic disorder without symptoms of schizophrenia, acute purulent meningitis, addiction, Addison syndrome, adenovirus serotypes, adjustment disorders, adrenal hyperfunction, adrenal hypofunction, adrenoleuknock outdystrophy, adrenomyeloneuropathy, advanced sleep-phase syndrome, affective disorder syndromes, agenesis of the corpus callosum, agnosia, agoraphobia, agraphia, agyria, agyria-pachygyria, ahylognosia, Aicardi syndrome, AIDS, akathisia, akinesia, akinetic mutism, akinetopsia, alcohol abuse, alcohol dependence syndrome, alcohol neuropathy, alcohol related disorders, alcoholic amblyopia, alcoholic blacknack oututs, alcoholic cerebellar degeneration, alcoholic dementia, alcoholic hallucinosis, alcoholic polyneuropathy, alcohol-induced anxiety disorders, alcohol-induced dementia, alcohol-induced mood disorders, alcohol-induced psychosis, alcoholism, Alexander's syndrome, alexia, alexia with agrphia, alexia without agraphia, alien hand syndrome, Alper's disease, altered sexuality syndromes, alternating hemiplagia, Alzheimer's disease, Alzheimer-like senile dementia, Alzheimer-like juvenile dementia, amenorrhea, aminoacidurias, amnesia, amnesia for offences, amok-type reactions, amorphognosia, amphetamine addiction, amphetamine or amphetamine-like related disorders, amphetamine withdrawal, amyloid neuropathy, amyotrophic lateral sclerosis, anencephaly, aneurysms, angioblastic meningiomas, Angelman's syndrome, anhidrosis, anisocoria, anomia, anomic aphasia, anorexia nervosa, anosmia, anosognosia, anterior cingulate syndrome, anterograde amnesia, antibiotic-induced neuromuscular blockade, antisocial personality disorder, Anton's syndrome, anxiety and obsessive-compulsive disorder syndromes, anxiety disorders, apathy syndromes, aphasia, aphemia, aplasia, apnea, apraxia, arachnoid cyst, archicerebellar syndrome, Arnold-Chiari malformation, arousal disorders, arrhinencephaly, arsenic poisoning, arteriosclerotic Parkinsonism, arteriovenous aneurysm, arteriovenous malformations, aseptic meningeal reaction, Asperger's

syndrome, astereognosis, asthenia, astrocytomas, asymbolia, asynergia, ataque de nervios, ataxia, ataxia telangiectasia, ataxic cerebral palsy, ataxic dysarthria, athetosis, atonia, atonic seizures, attention deficit disorder, attention-deficit and disruptive behavior disorders, attention-deficit hyperkinetic disorders, atypical Alzheimer's disease, atypical autism, autism, autism spectrum disorder, avoidant personality disorder, axial dementias, bacterial endocarditis, bacterial infections, Balint's syndrome, ballism, balo disease, basophilic adenoma, Bassen-Knock outznzweig syndrome, Batten disease, battered woman syndrome, Behçet syndrome, Bell' palsy, benign essential tremor, benign focal epilepsies of childhood, benign intracranial hypertension, benxodiazepine dependence, bilateral cortical dysfunction, Binswanger's disease, bipolar disorder, bipolar type 1 disorder, bipolar type 2 disorder, blepharospasm, body dysmorphic disorder, Bogaert-Bertrand disease, Bogarad syndrome, borderline personality disorder, botulism, Bouffée Délirante-type reactions, brachial neuropathy, bradycardia, bradykinesia, brain abscess, brain edema, brain fog, brain stem glioma, brainstem encephalitis, brief psychotic disorder, broca's aphasia, brucellosis, bulimia, bulimia nervosa, butterfly glioma, cachexia, caffeine related disorders, california encephalitis, callosal agenesis, Canavan's syndrome, cancer pain, cannabis dependence, cannabis flashbacks, cannabis psychosis, cannabis related disorders, carcinoma-associated retinopathy, cardiac arrest, cavernous malformations, cellular (cytotoxic) edema, central facial paresis, central herniation syndrome, central neurogenic hyperventilation, central pontine myelinolysis, central post-stroke syndrome (thalamic pain syndrome), cerebellar hemorrhage, cerebellar tonsillar herniation syndrome, cerebral amyloid (congophilic) angiopathy, cerebral hemorrhage, cerebral malaria, cerebral palsy, cerebral subdural empyema, cerebrotendinous xanthomatosis, cerebrovascular disorders, cervical tumors, cestodes, Charcot-Carrie-tooth disease, Chediak-Cigashi disease, Cheiro-oral syndrome, chiari malformation with hydrocephalus, childhood disintegrative disorder, childhood feeding problems, childhood sleep problems, cholesteatomas, chordomas, chorea, chorea gravidarum, choreoathetosis, chromophobe adenoma, chromosomal disorders, chronic biplar major depression, chronic

bipolar disorder, chronic demyelinating polyneuritis, chronic depression, chronic fatigue syndrome, chronic gm2 gangliosidosis, chronic idiopathic sensory neuropathy, chronic inflammatory demyelinating polyneuropathy, chronic inflammatory demyelinating polyradiculoneuropathy, chronic pain, chronic paroxysmal hemicrania, chronic sclerosing panencephalitis, chronic traumatic encephalopathy, chronobiological disorders, circadian rhythm disorder, circadian rhythm disorders, Claude's syndrome, clonic seizures, cluster headache, cocaine addiction, cocaine withdrawal, cocaine-related disorders, Cockayne's syndrome, colloid cysts of the third ventricle, colorado tick fever, coma, communicating hydrocephalus, communication disorders, complex partial seizures, compression neuropathy, compulsive buying disorder, conceptual apraxia, conduct disorders, conduction aphasia, conduction apraxia, congenital analgesia, congenital cytomegalovirus disease, congenital hydrocephalus, congenital hypothyroidism, congenital muscular dystrophy, congenital myasthenia, congenital myotonic dystrophy, congenital rubella syndrome, congenital angiopathy, constipation, coprophilia, cornelia de lange syndrome, cortical dementias, cortical heteropias, corticobasal degeneration, corticobasal ganglionic degeneration, coxsackievirus, cranial meningoceles, craniopharyngioma, craniorachischisis, craniosynostosis, cranium bifidum, cretinism, Creutzfeldt-Jakob disease, Cri-du-Chat syndrome, cruciate hemiplegia, cryptococcal granulomas, cryptococcosis, culturally related syndromes, culturally stereotyped reactions to extreme environmental conditions (arctic hysteria), Cushing syndrome, cyclothymia, cysticercosis, cytomegalovirus, Dandy-Walker malformation, deafness, defects in the metabolism of amino acids, dehydration, Dejerine-Roussy syndrome, Dejerine-Sottas disease, delayed and advanced sleep phase syndromes, delayed ejaculation, delayed puberty, delayed-sleep-phase syndrome, delirium due to alcohol, delirium due to intoxication, delirium due to withdrawal, delirium, dementia, and amnesic and other cognitive disorders, delusional disorder, delusional disorder: erotomania subtype, delusional disorder: grandiose subtype, delusional disorder: jealousy subtype, delusional misidentification syndromes, dementia due to HIV disease, dementia

pugilistica, dementias, dementias associated with extrapyramidal syndrome, dentatorubral-pallidoluysian atrophy, dependent personality disorder, depersonalization disorder, depression, depressive personality disorder, dermoids, developmental speech and language disorder, devic syndrome, devivo disease, diabetes, diabetes insipidus, diabetic neuropathy, dialysis demential, dialysis dysequilibrium syndrome, diencephalic dementias, diencephalic dysfunction, diencephalic syndrome of infancy, diencephalic vascular dementia, diffuse sclerosis, digestive disorders, diphtheria, diplopia, disarthria, disassociation apraxia, disorders of carbohydrate metabolism, disorders of excessive somnolence, disorders of metal metabolism, disorders of purine metabolism, disorders of sexual arousal, disorders of sexual aversion, disorders of sexual desire, disorders of the sleep-wake schedule, dissociative disorders, dorsolateral tegmental pontine syndrome, Down syndrome, Down syndrome with dementia, drug dependance, drug overdose, drug-induced myasthenia, Duchenne muscular dystrophy, dwarfism, dysarthria, dysdiadochokinesia, dysembryoplastic neuroepithelial tumor, dysexecutive syndrome, dysgraphia, dyskinesia, dyskinetic cerebral palsy, dyslexia, dysmetria, dysomnia, dysosmia, dyspareunia, dysphagia, dysphasia, dysphonia, dysplasia, dyspnea, dysprosody, dyssomnia, dyssynergia, dyesthesia, dysthymia, dystonia, dystrophinopathies, early adolescent gender identity disorder, early infantile epileptic encephalopathy (Ohtahara syndrome, early myoclonic epileptic encephalopathy, Eaton-Lambert syndrome, echinococcus (hydatid cysts), echolalia, echovirus, eclampsia, Edward's syndrome, elimination disorders, embolismintracerebral hemorrhage, Emery-Dreifuss muscular dystrophy, encephalitis lethargica, encephaloceles, encephalotrigeminal angiomas, enophthalmos, enterovirus, enuresis, eosinophilic meningitis, ependymoma, epidural spinal cord compression, epilepsy, episodic ataxia, epstein-barr, equine encephalomyelitis, erectile dysfunction, essential thrombocythemia, essential tremor, esthesioneuroblastoma, excessive daytime somnolence, excessive secretion of antidiuretic hormone, excessive sleepiness, exhibitionism, expressive language disorder, extramedullary tumors, extrasylvian aphasias, extratemporal neocortical epilepsy, fabry's

disease, facioscapulohumeral muscular dystrophy, factitious disorder, factitious disorders, false memories, familial dysautonomia, familial periodic paralysis, familial spastic paraparesis, familial spastic paraplegias, fear disorders, feeding and eating disorders of infancy or early childhood, female sexual arousal disorder, fetal alcohol syndrome, fetishism, flaccid dysarthria, floppy infant syndrome, focal inflammatory demyelinating lesions with mass effect, focal neonatal hypotonia, folie à deux, foramen magnum tumors, Foville's syndrome, fragile-x syndrome, Freidrich 's ataxia, Frolich syndrome, frontal alexia, frontal convexity syndrome, frontotemporal dementia, frontotemporal dementias, frotteurism, fungal infection, galactocerebroside lipidosis, galactorrhea, ganglioneuroma, Gaucher disease, gaze palsy, gender identity disorder, generalized anxiety disorder, genital shrinking syndrome (Knock out, Suo-Yang), germ cell tumors, Gerstmann's syndrome, Gerstmann-Straüssler syndrome, Gerstmann-Straussler-Schenker disease, Gertmann's syndrome, gestational substance abuse syndromes, giant axonal neuropathy, gigantism, Gilles de la Tourette syndrome, glioblastoma multiforme, gliomas, gliomatosis cerebri, global aphasia, glossopharyngeal neuralgia, glycogen storage diseases, gm1-gangliosidosis, gm2-gangliosidoses, granular cell tumor, granulocytic brain edema, granulomas, granulomatous angiitis of the brain, Grave's disease, growild typeh hormone deficit, growild typeh-hormone secreting adenomas, guam-Parkinson complex dementia, Guillain-Barré syndrome, Hallervorden-Spatz disease, hallucinogen persisting perception disorder, hallucinogen related disorders, hartnup disease, headache, helminthic infections (trichinellosis), hemangioblastomas, hemangiopericytomas, hemiachromatopsia, hemianesthesia, hemianopsia, hemiballism, hemiballismus, hemihypacusis, hemihypesthesia, hemiparesis, hemispatial neglect, hemophilus influenza meningitis, hemorrhagic cerebrovascular disease, hepatic coma, hepatic encephalopathy, hepatolenticular degeneration (Wilson disease), hereditary amyloid neuropathy, hereditary ataxias, hereditary cerebellar ataxia, hereditary neuropathies, hereditary nonprogressive chorea, hereditary predisposition to pressure palsies, hereditary sensory autonomic neuropathy, hereditary sensory neuropathy,

hereditary spastic paraplegia, hereditary tyrosinemia, heremichorea, heremifacial spasm, herniation syndromes, herpes encephalitis, herpes infections, herpes zoster, herpes simplex, heterotopia, hexacarbon neuropathy, histrionic personality disorder, HIV, Holmes-Adie syndrome, homonymous quadrantanopia, Horner's syndrome, human β -mannosidosis, Hunter's syndrome, Huntington's chorea, Huntington's disease, Hurler's syndrome, Hwa-Byung, hydraencephaly, hydrocephalus, hyper thyroidism, hyperacusis, hyperalgesia, hyperammonemia, hypereosinophilic syndrome, hyperglycemia, hyperkalemic periodic paralysis, hyperkinesia, hyperkinesis, hyperkinetic dysarthria, hyperosmia, hyperosmolar hyperglycemic nonketonic diabetic coma, hyperparathyroidism, hyperphagia, hyperpituitarism, hyperprolactinemia, hypersexuality, hypersomnia, hypersomnia secondary to drug intake, hypersomnia-sleep-apnea syndrome, hypersomnolence, hypertension, hypertensive encephalopathy, hyperthermia, hyperthyroidism (Graves disease), hypertonia, hypnagogic (predormital) hallucinations, hypnogenic paroxysmal dystonia, hypoadrenalism, hypoalgesia, hypochondriasis, hypoglycemia, hypoinsulinism, hypokalemic periodic paralysis, hypokinesia, hypokinetic dysarthria, hypomania, hypoparathyroidism, hypophagia, hypopituitarism, hypoplasia, hyposmia, hyposthenuria, hypotension, hypothermia, hypothyroid neuropathy, hypothyroidism, hypotonia, Hyrler syndrome, hysteria, ideational apraxia, ideomotor apraxia, idiopathic hypersomnia, idiopathic intracranial hypertension, idiopathic orthostatic hypotension, immune mediated neuropathies, impersistence, impotence, impulse control disorders, impulse dyscontrol and aggression syndromes, impulse-control disorders, incontinence, incontinentia pigmenti, infantile encephalopathy with cherry-red spots, infantile neuraxonal dystrophy, infantile spasms, infantilism, infarction, infertility, influenza, inhalant related disorders, insomnias, insufficient sleep syndrome, intention tremor, intermittent explosive disorder, internuclear ophthalmoplegia, interstitial (hydrocephalic) edema, intoxication, intracranial epidural abscess, intracranial hemorrhage, intracranial hypotension, intracranial tumors, intracranial venous-sinus thrombosis, intradural hematoma, intramedullary tumors, intravascular lymphoma,

ischemia, ischemic brain edema, ischemic cerebrovascular disease, ischemic neuropathies, isolated inflammatory demyelinating CNS syndromes, Jackson-Collet syndrome, Jakob-Creutzfeldt disease, Japanese encephalitis, jet lag syndrome, Joseph disease, Joubert's syndrome, juvenile neuroaxonal dystrophy, Kayak-Svimmel, Kearns-Sayre syndrome, kinky hair disease (Menkes syndrome), Kleine-Levin syndrome, kleptomania, Klinefelter's syndrome, Kluver-Bucy syndrome, Knock outerber-Salus-Elschnig syndrome, Knock outsknock outff's syndrome, krabbe disease, krabbe leuknock outdystrophy, Kugelberg-Welander syndrome, kuru, Lafora's disease, language deficits, language related disorders, latah-type reactions, lateral mass herniation syndrome, lateropulsation, lathyrism, Laurence-Moon Biedl syndrome, Laurence-Moon syndrome, lead poisoning, learning disorders, leber hereditary optic atrophy, left ear extinction, legionella pneumophila infection, Leigh's disease, Lennoc-Gastaut syndrome, Lennox-Gastaut's syndrome, leprosy, leptospirosis, Lesch-Nyhan syndrome, leukemia, leuknock outdystrophies, Lévy-Roussy syndrome, lewy body dementia, lewy body disease, limb girdle muscular dystrophies, limbic encephalitis, limbic encephalopathy, lissencephaly, localized hypertrophic neuropathy, locked-in syndrome, logoclonia, low pressure headache, Lowe syndrome, lumbar tumors, lupus anticoagulants, lyme disease, lyme neuropathy, lymphocytic choriomeningitis, lymphomas, lysosomal and other storage diseases, macroglobinemia, major depression with melancholia, major depression with psychotic features, major depression without melancholia, major depressive (unipolar) disorder, male orgasmic disorder, malformations of septum pellucidum, malignant peripheral nerve sheath tumors, malingers, mania, mania with psychotic features, mania without psychotic features, maple syrup urine disease, Marchiafava-Bignami syndrome, Marcus Gunn syndrome, Marie-Foix syndrome, Marinesco-Sjögren syndrome, Maroteaux-Lamy syndrome, masochism, masturbatory pain, measles, medial frontal syndrome, medial medullary syndrome, medial tegmental syndrome, medication-induced movement disorders, medullary dysfunction, medulloblastomas, medulloepithelioma, megalencephaly,

melanocytic neoplasms, memory disorders, memory disturbances, meniere syndrome, meningeal carcinomatosis, meningeal sarcoma, meningial gliomatosis, meningiomas, meningism, meningitis, meningococcal meningitis, mental neuropathy (the numb chin syndrome), mental retardation, mercury poisoning, metabolic neuropathies, metachromatic leukinck outdystrophy, metastatic neuropathy, metastatic tumors, metazoal infections, microcephaly, microencephaly, micropolygyria, midbrain dysfunction, midline syndrome, migraine, mild depression, Millard-Gubler syndrome, Miller-Dieker syndrome, minimal brain dysfunction syndrome, miosis, mitochondrial encephalopathy with lactic acidosis and stroke (melas), mixed disorders of scholastic skills, mixed dysarthrias, mixed transcortical aphasia, Möbius syndrome, Mollaret meningitis, monoclonal gammopathy, mononeuritis multiplex, monosymptomatic hypochondriacal psychosis, mood disorders, Moritz Benedikt syndrome, Morquio syndrome, Morton's neuroma, motor neuron disease, motor neurone disease with dementia, motor neuropathy with multifocal conduction block, motor skills disorder, mucopolidoses, mucopolysaccharide disorders, mucopolysaccharidoses, multifocal eosinophilic granuloma, multiple endocrine adenomatosis, multiple myeloma, multiple sclerosis, multiple system atrophy, multiple systems atrophy, multisystemic degeneration with dementia, mumps, Munchausen syndrome, Munchausen syndrome by proxy, muscular hypertonia, mutism, myasthenia gravis, mycoplasma pneumoniae infection, myoclonic seizures, myoclonic-astatic epilepsy (doose syndrome), myoclonus, myotonia congenita, myotonic dystrophy, myotonic muscular dystrophy, nacoletsy, narcissistic personality disorder, narcolepsy, narcolepsy-cataplexy syndrome, necrophilia, nectrotizing encephalomyelopathy, Nelson's syndrome, neocerebellar syndrome, neonatal myasthenia, neonatal seizures, nervios, nerves, neurasthenia, neuroacanthocytosis, neuroaxonal dystrophy, neurocutaneous disorders, neurofibroma, neurofibromatosis, neurogenic orthostatic hypotension, neuroleptic malignant syndrome, neurologic complications of renal transplantation, neuromyelitis optica, neuromyotonia (Isaacs syndrome), neuronal ceroid lipofuscinoses, neuro-ophthalmic disorders,

neuropathic pain, neuropathies associated with infections, neuropathy associated with cryoglobulins, neuropathy associated with hepatic diseases, neuropathy induced by cold, neuropathy produced by chemicals, neuropathy produced by metals, neurosyphilis, new variant Creutzfeldt-Jakob disease, nicotine dependence, nicotine related disorders, nicotine withdrawal, niemann-pick disease, nocturnal dissociative disorders, nocturnal enuresis, nocturnal myoclonus, nocturnal sleep-related eating disorders, noocerebellar syndrome, non-alzheimer frontal-lobe degeneration, nonamyloid polyneuropathies associated with plasma cell dyscrasia, non-lethal suicidal behavior, nonlocalizing aphasic syndromes, normal pressure hydrocephalus, Nothnagel's syndrome, nystagmus, obesity, obsessive-compulsive (anankastic) personality disorder, obsessive-compulsive disorder, obstetric factitious disorder, obstructive hydrocephalus, obstructive sleep apnea, obstructive sleep apnoea syndrome, obstructive sleep hypopnoea syndrome, occipital dementia, occlusive cerebrovascular disease, oculocerebrorenal syndrome of Lowe, oculomotor nerve palsy, oculopharyngeal muscular dystrophy, oligodendrogliomas, olivopontocerebellar atrophy, Ondine's curse, one and a half syndrome, onychophagia, opiate dependence, opiate overdose, opiate withdrawal, opioid related disorders, oppositional defiant disorder, opsoclonus, orbitofrontal syndrome, orgasmic anhedonia, orgasmic disorders, osteosclerotic myeloma, other disorders of infancy, childhood, or adolescence, other medication-induced movement disorders, pachygyria, paedophilia, pain, pain syndromes, painful legs-moving toes syndrome, paleocerebellar syndrome, palilalia, panhypopituitarism, panic disorder, panic disorders, papillomas of the choroid plexus, paraganglioma, paragonimiasis, paralysis, paralysis agitans (shaking palsy), paramyotonia congenita, paraneoplastic cerebellar degeneration, paraneoplastic cerebellar syndrome, paraneoplastic neuropathy, paraneoplastic syndromes, paranoia, paranoid personality disorder, paranoid psychosis, paraphasia, paraphilias, paraphrenia, parasitic infections, parasomnia, parasomnia overlap disorder, parenchymatous cerebellar degeneration, paresis, paresthesia, Parinaud's syndrome, Parkinson's disease, Parkinson-dementia complex of Guam, Parkinsonism, Parkinsonism-plus syndromes, Parkinson's

disease, paroxysmal ataxia, paroxysmal dyskinesia, partial (focal) seizures, partialism, passive-aggressive (negativistic) personality disorder, Patau's syndrome, pathological gambling, peduncular hallucinosis, Pelizaeus-Merzbacher disease, perineurioma, peripheral neuropathy, perisylvian syndromes, periventricular leukoencephalomalacia, periventricular white matter disorder, periventricular-intraventricular hemorrhage, pernicious anemia, peroneal muscular atrophy, peroxisomal diseases, perseveration, persistence of cavum septi pellucidi, persistent vegetative state, personality disorders, pervasive developmental disorders, phencyclidine (or phencyclidine-like) related disorders, phencyclidine delirium, phencyclidine psychosis, phencyclidine-induced psychotic disorder, phenylketonuria, phobic anxiety disorder, phonic tics, photoreceptor degeneration, pibloktoq, Pick's disease, pineal cell tumors, pineoblastoma, pineocytoma, pituitary adenoma, pituitary apoplexy, pituitary carcinoma, pituitary dwarfism, placebo effect, Plummer's disease, pneumococcal meningitis, poikilothermia, polio, polycythemia vera, polydipsia, polyglucosan storage diseases, polymicrogyria, polymyositis, polyneuropathy with dietary deficiency states, polysubstance related disorder, polyuria, pontine dysfunction, pontosubicular neuronal necrosis, porencephaly, porphyric neuropathy, portal-systemic encephalopathy, postcoital headaches, postconcussion syndrome, postencephalic Parkinson syndrome, posthemorrhagic hydrocephalus, postinflammatory hydrocephalus, postpartum depression, postpartum psychoses, postpolio syndrome, postpsychotic depression, post-stroke hypersomnia, post-traumatic amnesia, post-traumatic epilepsy, post-traumatic hypersomnia, post-traumatic movement disorders, post-traumatic stress disorder, post-traumatic syndromes, Prader-Willi syndrome, precocious puberty, prefrontal dorsolateral syndrome, prefrontal lobe syndrome, premenstrual stress disorder, premenstrual syndrome, primary amebic meningoencephalitis, primary CNS lymphoma, primary idiopathic thrombosis, primary lateral sclerosis, primitive neuroectodermal tumors, prion disease, problems related to abuse or neglect, progressive bulbar palsy, progressive frontal lobe dementias, progressive multifocal leukoencephalopathy, progressive muscular atrophy,

progressive muscular dystrophies, progressive myoclonic epilepsies, progressive myoclonus epilepsies, progressive non-fluent aphasia, progressive partial epilepsies, progressive rubella encephalitis, progressive sclerosing poliodystrophy (Alpers disease), progressive subcortical gliosis, progressive supranuclear palsy, progressive supranuclear paralysis, progressive external ophthalmoplegia, prolactinemia, prolactin-secreting adenomas, prosopagnosia, protozoan infection, pseudobulbar palsy, pseudocyesis, pseudodementia, psychic blindness, psychogenic excoriation, psychogenic fugue, psychogenic pain syndromes, psychological mutism, psychosis after brain injury, psychotic syndromes, ptosis, public masturbation, puerperal panic, pulmonary edema, pure word deafness, pyromania, quadrantanopsia, rabies, radiation neuropathy, Ramsay Hunt syndrome, rape trauma syndrome, rapid cycling disorder, rapid ejaculation, Raymond-Cestan-Chenais syndrome, receptive language disorder, recovered memories, recurrent bipolar episodes, recurrent brief depression, recurrent hypersomnia, recurrent major depression, Refsum disease, reiterative speech disturbances, relational problems, REM sleep behavior disorder, REM sleep behavioral disorder, repetitive self-mutilation, repressed memories, respiratory dysrhythmia, restless legs syndrome, Rett's syndrome, Reye syndrome, rhythmic movement disorders, rocky mountain spotted fever, rostral basal pontine syndrome, rubella, Rubinstein-Taybi syndrome, sadistic personality disorder, Salla disease, Sandhoff disease, Sanfilippo syndrome, sarcoid neuropathy, sarcoidosis, scapuloperoneal syndromes, schistosomiasis (bilharziasis), schizencephaly, schizoaffective disorder, schizoid personality disorder, schizophrenia, schizophrenia and other psychotic disorders, schizophrenia-like psychosis, schizophreniform disorder, schizotypal personality disorder, school-refusal anxiety disorder, schwannoma, scrub typhus, seasonal depression, secondary spinal muscular atrophy, secondary thrombosis, sedative hypnotic or anxiolytic-related disorders, seizure disorders, selective mutism, self-defeating (masochistic) personality disorder, semen-loss syndrome (shen-k'uei, dhat, jiryan, sukra prameha), senile chorea, senile dementia, sensory perineuritis, separation anxiety disorder, septal syndrome, septo-optic dysplasia, severe hypoxia, severe

myoclonic epilepsy, sexual and gender identity disorders, sexual disorders, sexual dysfunctions, sexual pain disorders, sexual sadism, Shapiro syndrome, shift work sleep disorder, Shy-Drager syndrome, sialidosis, sialidosis type 1, sibling rivalry disorder, sickle cell anemia, Simmonds disease, simple partial seizures, simultanagnosia, sleep disorders, sleep paralysis, sleep terrors, sleep-related enuresis, sleep-related gastroesophageal reflux syndrome, sleep-related headaches, sleep-wake disorders, sleepwalking, Smith-Magenis syndrome, social anxiety disorder, social phobia, social relationship syndromes, somatoform disorders, somnambulism, Sotos syndrome, spasmodic dysphonia, spasmodic torticollis (wry neck), spastic cerebral palsy, spastic dysarthria, specific developmental disorder of motor function, specific developmental disorders of scholastic skills, specific developmental expressive language disorder, specific developmental receptive language disorder, specific disorders of arithmetical skills, specific phobia, specific speech articulation disorder, specific spelling disorder, speech impairment, spina bifida, spinal epidural abcess, spinal muscular atrophies, spinocerebellar ataxias, spirochete infections, spongiform encephalopathies, spongy degeneration of the nervous system, St. Louis encephalitis, stammer, staphylococcal meningitis, startle syndromes, status marmoratus, steele-richardson-olszewski syndrome, stereotypic movement disorder, stereotypies, stiff-man syndrome, stiff-person syndrome, stimulant psychosis, Strachan syndrome (nutritional neuropathy), streptococcal meningitis, striatonigral degeneration, stroke, strongyloidiasis, sturge-weber disease (Krabbe-Weber-Dimitri disease), stutter, subacute combined degeneration of the spinal cord, subacute motor neuronopathy, subacute necrotic myelopathy, subacute sclerosing panencephalitis, subacute sensory neuronopathy, subarachnoid hemorrhage, subcortical aphasia, subfalcine herniation syndrome, substance abuse, substance related disorders, sudanophilic leukocon outdystrophis, sudden infant death syndrome, suicide, sulfatide lipidosis, susto, espanto, meido, sydenham chorea, symetric neuropathy associated with carcinoma, sympathotonic orthostatic hypotension, syncope, syndromes related to a cultural emphasis on learnt dissociation, syndromes related to a cultural emphasis on

presenting a physical appearance pleasing to others (taijin-kyofu reactions), syndromes related to acculturative stress, syringobulbia, syringomyelia, systemic lupus erythematosus, tachycardia, tachypnea, Tangier disease, tardive dyskinesia, Tay-sachs disease, telangiectasia, telencephalic leukoencephalopathy, telephone scatologia, temporal lobe epilepsy, temporoparietal dementia, tension-type headache, teratomas, tetanus, tetany, thalamic syndrome, thallium poisoning, thoracic tumors, thrombotic thrombocytopenic purpura, thyroid disorders, tic disorders, tick paralysis, tick-borne encephalitis, tinnitus, toxic neuropathy, tonic seizures, tonic-clonic seizures, torticollis, Tourette syndrome, toxic neuropathies, toxoplasmosis, transcortical motor aphasia, transcortical sensory aphasia, transient epileptic amnesia, transient global amnesia, transitional sclerosis, transvestic fetishism, traumatic brain injury, traumatic neuroma, traumatic mutism, tremors, trichinosis, trichotillomania, trigeminal neuralgia, trochlear nerve palsy, tropical ataxic neuropathy, tropical spastic paraparesis, trypanosomiasis, tuberculomas, tuberculous meningitis, tuberous sclerosis, tumors, Turner's syndrome, typhus fever, ulegyria, uncinata fits, Unverricht-Lundborg's disease, upper airway resistance syndrome, upward transtentorial herniation syndrome, uremic encephalopathy, uremic neuropathy, urophilia, vaccinia, varicella-zoster, vascular dementia, vascular malformations, vasculitic neuropathies, vasogenic edema, velocardiofacial syndrome, venous malformations, ventilatory arrest, vertigo, vincristine toxicity, viral infections, visuospatial impairment, Vogt-Knock outyanagi-Harada syndrome, Von Hippel-Lindau disease, Von Racklinghausen disease, voyeurism, Waldenström's macroglobulinemia, Walker-Warburg syndrome, Wallenburg's syndrome, Walleyed syndrome, Weber's syndrome, Wernicke's encephalopathy, Werdnig-Hoffmann disease, Wernicke's encephalopathy, Wernicke-Knocks outsaknock out syndrome, Wernicke's aphasia, West's syndrome, whipple disease, Williams syndrome, Wilson disease, windigo, witknock out, witigo, withdrawal with grand mal seizures, withdrawal with perceptual disturbances, withdrawal without complications, Wolman disease, xeroderma pigmentosum, xyy syndrome, Zellweger syndrome.

662. (New) The method of any of claims 646-660, wherein said neurological disease or disorder involves one or more tissues selected from the group consisting of hypothalamus, amygdala, pituitary, nervous system, brainstem, cerebellum, cortex, frontal cortex, hippocampus, striatum, and thalamus.

663. (New) A mouse comprising a mutation in a gene encoding a polypeptide that is substantially identical to a polypeptide listed in Table 1.

664. (New) A method of making a mouse exhibiting altered behavior, said method comprising the step of introducing into said mouse a mutation in a gene encoding a polypeptide comprising a polypeptide listed in any one of Tables 3-14 and 33.

665. (New) A cell isolated from a non-human mammal comprising a transgene comprising a nucleic acid molecule encoding a GPCR related polypeptide.

666. (New) A cell isolated from a non-human mammal comprising a mutation in a gene encoding a polypeptide that is substantially identical to a polypeptide listed in Table 1.

667. (New) A transgenic mouse expressing a transgene encoding a human GPCR polypeptide listed in Table 1.

668. (New) A transgenic mouse expressing a transgene encoding a mouse GPCR polypeptide listed in Table 1.

669. (New) A cell derived from the transgenic mouse of any of claims 663, 667 or 668.

670. (New) A method for identifying a compound that may be useful for the treatment of a neurological disease or disorder, said method comprising the steps of administering a candidate compound to a transgenic mouse expressing a transgene encoding a human GPCR polypeptide listed in any one of Tables 3-14 and 33; and determining whether said candidate compound alters the biological activity of said GPCR polypeptide, wherein a alteration in the biological activity of said GPCR polypeptide identifies said candidate compound as a compound that may be useful for the treatment of a neurological disease or disorder.

671. (New) The method of claim 670, wherein said mouse has a mutation in the endogenous gene that is orthologous to said transgene.

672. (New) A method for identifying a compound that may be useful for the treatment of a neurological disease or disorder, said method comprising the steps of administering a candidate compound to a transgenic mouse expressing in one its neurological tissues a transgene encoding a human GPCR polypeptide listed in any one of Tables 3-14 and 33, said mouse having a neurological disease or disorder; and determining whether said candidate compound treats said neurological disease or disorder.

673. (New) A method for identifying a compound that may be useful for the treatment of a neurological disease or disorder, said method comprising the steps of contacting a candidate compound with a cell from a transgenic mouse expressing a transgene encoding a human GPCR polypeptide listed in any one of Tables 3-14 and 33; and determining whether said candidate compound alters the biological activity of said GPCR polypeptide, wherein a alteration in the biological activity of said GPCR polypeptide identifies said candidate compound as a compound that may be useful for the treatment of a neurological disease or disorder.

674. (New) The method of claim 673, wherein said mouse has a mutation in the endogenous gene that is orthologous to said transgene.

675. (New) A method for identifying a compound that may be useful for the treatment of a neurological disease or disorder, said method comprising the steps of administering a candidate compound to a transgenic mouse comprising a mutation in a GPCR polypeptide listed in Tables 3-14 and 33; and determining whether said candidate compound alters the biological activity of said GPCR polypeptide, wherein an alteration in the biological activity of said GPCR polypeptide identifies said candidate compound as a compound that may be useful for the treatment of a neurological disease or disorder.